

What is claimed is:

1. An elevated and lower key structure, comprising:

a key-top-lid;

a base;

5 a scissors-device having a first connection rod and a second connection rod, and the two connection rods intersected to form a turning scissors configuration, both ends of the scissors-device separately connected to the base and the key-top-lid, the key-top-lid being moved in an upward and downward manner relative to the base through the scissors-device; and

10 a guiding block, installed on the base by a moveable manner, and can be moved between a first position and a second position;

15 wherein, when the guiding block moved from the second position toward the first position, the guiding block presses upon the second connection rod and makes the key-top-lid lowering down relative to the base, when the guiding block is moved from the first position toward the second position, the guiding block releases the second connection rod and makes the key-top-lid rising up relative to the base.

20 2. The elevated and lower key structure as said in the claim 1, wherein the elevated and lower key structure further comprises an elastic body, the elastic body is installed between the base and the key-top-lid, when the guiding block releases the second connection rod, through the elastic force of the elastic body, it can make the key-top-lid rising up relative to the base.

25 3. The elevated and lower key structure as said in the claim 1, wherein the elevated and lower key structure further comprises a guiding board installed on the base, the guiding block is installed on the guiding board, the guiding board also can make a motion of horizontal movement relative to the base, further bring the guiding block to move between the
30 first position and the second position.

4. The elevated and lower key structure as said in the claim 1, wherein the elevated and lower key structure further comprises a guiding

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board installed under the base, the guiding block is installed on the guiding board, an opening is formed on the base which corresponding to the guiding block, the guiding block passes through from the opening protrudes upwardly to the base, the guiding board also can make a motion of horizontal movement relative to the base and further bring the guiding block to move between the first position and the second position.

5. The elevated and lower key structure as said in the claim 1, wherein a lower end of the second connection rod is formed as a turning, pivoting joint match relative to the base, an upper end of the second connection rod is connected to key-top-lid, when the guiding block is moved from the second position toward the first position, the guiding block presses upon the second connection rod and rotates around an axis of the lower end and makes the upper end of the second connection rod to bring down the key-top-lid and further makes the key-top-lid lowering down relative to the base.

6. The elevated and lower key structure as said in the claim 1, wherein the guiding block is an elastic member, when the guiding block pressed upon the second connection rod, the guiding block will be slightly floated by the second connection rod in order to increase an arm and reduce a force which applied on the guiding block.

7. An elevated and lower keyboard apparatus, comprising:

a base;

a first key-top-lid;

a first scissors-device, which comprises a first connection rod and a second connection rod, and the two connection rods are intersected to form a turning scissors configuration, and both ends of the first scissors-device are separately connected to the base and the first key-top-lid, through the first scissors-device, it can allow the first key-top-lid make a movement of up and down relative to the base;

a second key-top-lid;

a second scissors-device, which comprises a third connection rod and a fourth connection rod, and the two connection rods are intersected to

form a turning scissors configuration, and both ends of the second scissors-device are separately connected to the base and the second key-top-lid, through the second scissors-device, it can allow the second key-top-lid making a movement of up and down relative to the base; and

5 a guiding board, which is installed on the base by a moveable manner, and which can be moved between a first position and a second position, and there are first guiding block and second guiding block formed on the guiding board;

10 wherein, when the guiding board is moved from the second position toward the first position, the first guiding block and the second guiding block separately press upon the second connection rod and the fourth connection rod, and make the first key-top-lid and the second key-top-lid lowering down relative to the base, and when the guiding board is moved from the first position toward the second position, the first guiding block and the second guiding block separately release the second connection rod and the fourth connection rod, and make the key-top-lid rising up relative to the base.

15 8. The keyboard apparatus as said in the claim 7, wherein the keyboard apparatus further comprises two elastic bodies, the two elastic bodies are installed separately between the base and the first and the second key-top-lid, when the first and the second guiding block separately release the second connection rod and the fourth connection rod, through the elastic force of the elastic bodies, it can make the first and the second key-top-lid rising up relative to the base.

20 9. The keyboard apparatus as said in the claim 7, wherein the guiding board is installed on the base

25 10. The keyboard apparatus as said in the claim 7, wherein the guiding board is installed under the base, the guiding block is installed on the guiding board, an opening is installed on the base which corresponding to the guiding block, the guiding block goes through from the opening protrudes upward to the base.

30 11. The keyboard apparatus as said in the claim 7, wherein the keyboard apparatus further comprises at least one operation part, the

operation part has a first support frame, a second support frame and an elastic element, a first end of the first support frame is pivotally connected with the base, a first end of the second support frame is pivotally connected with the guiding board, a second end of the first support frame is connected with a second end of the second support frame, one end of the elastic element is installed in an appropriate position of the operation part and the other end is against the base, when a force is applied on the operation part by an user, the elastic element is pressed down by the force, and the operation part takes the first end (connected with the base) of the first support frame as a fixed point, and the first end of the second support frame is moved toward the horizontal direction by the force, and the guiding board is moved from the second position to the first position, when the force is removed, a recovery force of the elastic element lifts up the operation part to make the guiding board moving from the first position to the second position.

12. The keyboard apparatus as said in the claim 7, wherein the lower ends of the second and the fourth connection rods are formed as the turning, pivoting joint matches relative to the base, the upper ends are separately connected to the first and the second key-top-lid, when the guiding board is moved from the second position toward the first position, the first and the second guiding block are moved corresponding to the movement of the guiding board and press upon the second connection rod and fourth connection rod, and make the second and the fourth connection rod separately rotate around axes of their lower ends, and make the upper ends of the second and the fourth connection rods to bring down the first and the second key-top-lid and further make the first and the second key-top-lid lowering down relative to the base.

13. The keyboard apparatus as said in the claim 7, wherein the guiding board further has at least two limited stop-blocks, the limited stop-blocks are elongated to the lower ends of the first and the third connection rods, through the lower end of the connection rod to contact against the limited stop-block, it can confine a movement of the guiding board in horizontal motion direction on the base.

14. A keyboard apparatus of a notebook computer, the notebook computer has a main body part and a screen part, the screen part is

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pivotaly connected and covered on the main body part, the keyboard apparatus is installed inside the main body part, comprising:

a base;

a first key-top-lid;

5 a first scissors-device, which comprises a first connection rod and a second connection rod, and both connection rods are intersected to form a turning scissors configuration, and both ends of the first scissors-device are separately connected to the base and the first key-top-lid, through the first scissors-device, it can allow the first key-top-lid make a movement of up and down relative to the base;

a second key-top-lid;

10 a second scissors-device, which comprises a third connection rod and a fourth connection rod, and both connection rods are intersected to form a turning scissors configuration, and both ends of the second scissors-device are separately connected to the base and the second key-top-lid, through the second scissors-device, it can allow the second key-top-lid making a movement of up and down relative to the base;

15 a guiding board, which is installed on the base in a moveable manner, the guiding board is moved between a first position and a second position, and there are at least one first guiding block and at least one second guiding block formed on the guiding board;

20 wherein, when the guiding board is moved from the second position toward the first position, the first guiding block and the second guiding block separately press upon the second connection rod and the fourth connection rod, and make the first key-top-lid and the second key-top-lid lowering down relative to the base, when the guiding board is moved from the first position toward the second position, the first guiding block and the second guiding block separately release the second connection rod and the fourth connection rod, while the key-top-lid rising up relative to the base; and

25 at least one operation part, movably connected to the guiding board and moved in horizontal direction relatively to the base.

15. The keyboard apparatus of a notebook computer as said in the claim 14, wherein the keyboard apparatus further comprises two elastic bodies, the elastic bodies are installed separately between the base and the first and the second key-top-lid, when the first and the second guiding block separately release the second connection rod and the fourth connection rod, through the elastic force of the two elastic bodies, it can make the first and the second key-top-lid rising up relative to the base.

16. The keyboard apparatus of a notebook computer as said in the claim 14, wherein the guiding board is installed on the base.

17. The keyboard apparatus of a notebook computer as said in the claim 14, wherein the guiding board is installed under the base, the guiding block is installed on the guiding board, an opening is formed on the base which corresponding to the guiding block, the guiding block passes through from the opening protrudes upwardly to the base.

18. The keyboard apparatus of a notebook computer as said in the claim 14, wherein the lower ends of the second and the fourth connection rods are formed as the turning, pivoting joint matches relative to the base, the upper ends are separately connected to the first and the second key-top-lid, when the guiding board is moved from the second position toward the first position, the first and the second guiding block corresponding to the movement of the guiding board press upon the second connection rod and fourth connection rod, and make the second and the fourth connection rod separately rotate around axes of their lower ends, and make the upper ends of the second and the fourth connection rods to bring down the first and the second key-top-lid and further make the first and the second key-top-lid lowering down relative to the base.

19. The keyboard apparatus of a notebook computer as said in the claim 14, wherein the operation part has a first support frame, a second support frame and an elastic element, a first end of the first support frame is pivotally connected with the base, a first end of the second support frame is pivotally connected with the guiding board, a second end of the first support frame is connected with a second end of the second support frame, one end of the elastic element is installed in an appropriate position of the operation part and the other end is against the base, the screen part

has a contact-moving part, when the screen part and the main body part are in a closed state, the contact-moving part presses against the operation part and makes the elastic element compressed by force, the operation part takes the first end (connected to the base) of the first support frame as a fixed point, the first end of the second support frame is moved toward the horizontal direction by the force, and makes the guiding board moving from the second position to the first position, when the screen part is pivotally lifted up from the main body part, the contact-moving part leaves away the operation part, a recovery force of the elastic element lifts up the operation part to make the guiding board moving from the first position to the second position.

20. The keyboard apparatus of a notebook computer as said in the claim 14, wherein the guiding board further has at least two limited stop-blocks, the limited stop-blocks are elongated to the lower ends of the first and the third connection rods, through the lower end of the connection rod to contact against the limited stop-block, it can confine a movement of the guiding board in horizontal motion direction on the base.